Volume 285 **CONTENTS** 25 February 1995

Inertial effects in chaotic mixing with diffusion. PRADIP DUTTA and RENE CHEVRAY *page* 1

Mixing due to grid-generated turbulence of a two-layer scalar profile. PABLO HUQ and REX E. BRITTER 17

Turbulence evolution and mixing in a two-layer stably stratified fluid. PABLO HUQ and REX E. BRITTER 41

On the identification of a vortex. JINHEE JEONG and FAZLE HUSSAIN 69

Two-dimensional periodic waves in shallow water. Part 2. Asymmetric waves. JOE HAMMACK, DARYL MCCALLISTER, NORMAN SCHEFFNER and HARVEY SEGUR 95

Self-similar spiral instabilities in elastic flows between a cone and a plate. GARETH H. MCKINLEY, ALPARSLAN ÖZTEKIN, JEFFREY A. BYARS and ROBERT A. BROWN 123

On convection and mixing driven by sedimentation. SILVANA S. S. CARDOSO and ANDREW W. WOODS 165

Direct computation of the sound from a compressible co-rotating vortex pair. BRIAN E. MITCHELL, SANJIVA K. LELE and PARVIZ MOIN 181

On the viscous decay rates of inertial waves in a rotating circular cylinder. R. R. KERSWELL and C. F. BARENGHI 203

Streamline topology in eccentric Taylor vortex flow. P. ASHWIN and G. P. KING 215

Rayleigh's streaming at large Reynolds number and its effect on shear flow. P. VAINSHTEIN 249

Breaking of standing internal gravity waves through two-dimensional instabilities. PASCALE BOURUET-AUBERTOT, J. SOMMERIA and C. STAQUET 265

The primary and inverse instabilities of directional viscous fingering. D. A. REINELT 303

Barotropic quasi-geostrophic *f*-plane flow over anisotropic topography. G. F. CARNEVALE, R. PURINI, P. ORLANDI and P. CAVAZZA 329

A model for large-scale structures in turbulent shear flows. ANDREW C. POJE and J. L. LUMLEY 349

The effects of a vertical contraction on turbulence dynamics in a stably stratified fluid. S. T. THORODDSEN and C. W. VAN ATTA 371

CORRIGENDUM 407

INDEX TO VOLUME 285 408

SCHEDULE OF INTERNATIONAL CONFERENCES ON FLUID MECHANICS 410